Confined Entry Permit Forms

Print and Complete These Forms Prior To Commencing Confined Space Work

Use 8.5 X 14 paper

Appendix A

Coordination Document

Contractor:		Entry Location:	
Date(s) of Entry			
Was the entry coordinated by Buffalo Trail Public Schools? • Yes (If yes, attach copy to BTPS entry plan permit) • No (Attach copy of contractor entry plan permit)			
Responsibilities:	ECCS	Contractor:	Contractor:
Entrant(s)			
Attendant(s)			
Monitoring Equipment			
Energy Isolation			
Ventilation Equipment			
Fall Arrest Equipment			
Personal Protective Equipment			
Other: (Please specify)			
Other: (Please specify)			
Contractor Representative: Please Print: _____ Signature: _____		Date: (DD/MM/YYYY)	
East Central Catholic Schools Representative Please Print: _____ Signature: _____		Date: (DD/MM/YYYY)	

Appendix B

Hazard Assessment Guide for Confined Spaces

Hazard	Explanatory notes	Method of test	Effects of Hazard	Examples
Atmosphere:				
Explosive Atmosphere CHECK IF APPLICABLE ☐	Before entering confined space, tests for presence of an Explosive atmosphere must be done. It should be noted that air-borne dust from grain, fine ground metals or other materials can form an explosive atmosphere. Explosive gases may displace oxygen. Note: Oxygen enrichment or deficiency can cause error in combustible gas detector readings.	Combustible gas detector - explosive gases must be monitored by equipment that can detect the lower explosives limit (L.E.L.) and upper explosive limit (U.E.L.). Residues may have to be disturbed to allow for release of explosive gases.	Explosion / burns / multiple injuries / death	1. Methane (or natural gas) CH4 - sources - gas line leaks, decaying matter. May be found adjacent to land fill sites; backed up, sluggish sewers. 2. Gasoline and other solvents - Storage tanks and adjacent areas, sewer systems proximity to pipelines, accidental spills may have definite odour.
Oxygen a) Deficiency CHECK IF APPLICABLE ☐	Deficiency - Acceptable breathing air contains between 19.5%-23% oxygen Air containing less than acceptable amounts of oxygen is a hazardous atmosphere.	Oxygen detection monitor.	Could result in slowing down of pulse rate, disorientation, unconsciousness, death.	Oxygen (02) deficiency can be caused by displacement by other gases, or by biological or chemical reactions (rusting, burning).
b) Enrichment CHECK IF APPLICABLE ☐	Enrichment - An atmosphere that contain more than the acceptable amount of oxygen (23.0%). Oxygen enrichment can cause an error in explosive meter readings	Oxygen detection meter. Note: Some equipment incapable of detecting for oxygen enrichment.	Creates explosive atmosphere, increases rate of chemical reaction	Enrichment may be caused by improper blanking of oxygen lines, leaking fuel gas, welding equipment, ventilation with oxygen instead of air
Hazard	**Explanatory Notes**	**Method of Test**	**Effects of Hazard**	**Examples**

Toxic Gases and Vapours CHECK IF APPLICABLE ☐	Testing with appropriate detection equipment shall be undertaken to determine the presence of toxic gas(es) to create and maintain a safe environment.	Monitors - specific testers must be used for specific toxic gases, e.g. H2S monitoring. It may be necessary to disturb residue / sludge to allow for release of toxic gases / vapours.	Can cause euphoria / disorienting effect, drowsiness, headaches, weakness, injury, disability, death.	1. Carbon Monoxide (CO) - colorless, Odourless, tasteless and very poisonous. Commonest source – internal combustion engines and decomposition of organic matter. 2. Carbon Dioxide (CO2) - Odourless. It is a heavy gas that can concentrate at lowest levels. It displaces oxygen and does not diffuse or mix readily with air. 3. Nitrogen Dioxide (NO2) - A pungent acrid odour. Product of gasoline and diesel engines. 4. Hydrogen Sulphide (H2S) - deadly gas commonly found in sewers, manure pits. Produced by decomposition of organic matter. Has a typical rotten egg odour, but higher amounts can kill the sense of smell.
Fumes, Dusts, Mists, Fogs CHECK IF APPLICABLE ☐	These hazards are usually recognized visually	Monitors - Testers specific for each fume, dust, mist, fog must be used	Explosion, disability, injury, burns, irritation, death poisoning	1. Fumes - From asphalt, welding, acid fumes from washing process 2. Dust - Grain dust, sand, blasting (silica) 3. Mist - Spray application
Hazard	Explanatory notes	Method of test	Effects of Hazard	Examples
Smoke CHECK IF APPLICABLE ☐	Smoke is a combination of gases, vapours, fumes and dusts	Visual - Use appropriate detection (monitoring) equipment to determine presence of toxic agent(s)	All effects of gases, dusts, vapours, mists, fumes	Result of combustion, e.g. burning materials, smoke from welding
Biological Agents CHECK IF APPLICABLE ☐	Biological agents are found in a variety of locations. Extreme care should be taken when working near health care facilities or industrial processes using biological agents. Conscientious personal hygiene is essential.	Testing for presence of biological agents is very difficult. If type of agent(s) is known, then specific testing may be done.	Ill health, disease, Disorders, irritation, death.	Bacterial and viral infection.

Safety Hazards:

Entry/Exit (Access / Egress) CHECK IF APPLICABLE ☐	Openings that are small, narrow or otherwise difficult to negotiate can be a serious hazard. Where self-contained breathing apparatus is being used, openings must be of a size to allow worker with equipment properly worn to pass through. Access openings less than 700 mm (28") are not recommended	Visual identification of obstructions that could interfere with normal movement or emergency rescue.	Injury, disability, death	1. Exits at height that could cause falls. 2. Constricted openings 3. Angled openings 4. Exits into traffic and machinery 5. Exits at deep depths.
Ventilation Systems CHECK IF APPLICABLE ☐	Lack of adequate ventilation may cause a build-up of contaminants etc. Ventilation systems can introduce hazards into the work area, e.g. carbon monoxide (CO) fumes.	Monitoring (anemometer, smoke tubes for air movement). Toxic monitors may also be necessary to ensure good quality air.	Explosion, disease, irritation, injury, disability, death	Improper ventilation can result in: 1. Oxygen levels variation 2. Buildup of toxic gases, vapours, dusts, mists, fumes (smoke). 3. Introduction of biologic agents, toxic gases, explosive gases
Machinery / Mechanical Equipment CHECK IF APPLICABLE ☐	Make sure equipment is immobilized (de-energized) so that it will not be a hazard to workers	Visual and function testing	Injury, disability, death	Drive belts, augers, paddles, scrapers, agitators and pumps

Hazard	Explanatory notes	Method of test	Effects of Hazard	Examples
Piping / Distribution Systems CHECK IF APPLICABLE ☐	Contents of pipes and supply lines if allowed to enter a confined space can create a life-threatening situation for workers.	Monitoring, visual	Chemical poisoning, drowning, burns, injury, disability, death	Steam lines, liquid distribution lines, feed mills and cement plants
Residual Chemicals / materials CHECK IF APPLICABLE ☐	1. Corrosive and/or toxic chemicals remaining in a confined space. Special attention should be made to ensure that lines, valves and meters are totally drained and properly decontaminated 2. Material that may be adhered to surfaces /walls of enclosures may collapse. 3. Loose granular material that may engulf worker. 4. Material that may encapsulate / trap other toxic / explosive materials. 5. Flooding by liquids	Monitoring Visual, Monitoring	Injury, disability, death, explosion Engulfment, suffocation, drowning, injury, disability, death	Storage tanks, digesters, liquid distribution systems, augers. 1. Silos, grain hoppers, fertilizer storage. 2. Sand, grains (e.g. Flax) 3. a) Rust build up in fuel storage tank b) sludge prevents release of Hydrogen sulphide (H2S) 4. Flooding in underground facilities
Electrical CHECK IF APPLICABLE ☐	Sources of unguarded electrical equipment - extreme caution must be taken when using conductive material around electrical surfaces (e.g. metal ladders, lifelines, steel bars, lines and cables, exposed terminals etc.)	Only by qualified personnel	Shock, burns, injury, disability, death	1. Underground electrical vaults and electrical distribution systems. 2. Motor control centers.
Poor Visibility CHECK IF APPLICABLE ☐	Caused by poor lighting obstructions, work process and procedure, fog/mist due to high humidity.	Visual	Injury, disability, death	Improper/ inadequate lighting, poor design of confined space, work process.

Physical Obstacles CHECK IF APPLICABLE ☐	This would include obstacles that impede movement and performance of work and rescue procedures.	Visual	Inability to remove injured worker, contusions, abrasions, fractures, disability, injury, death.	Cross bracing, baffle plates, piping.
Walking/ Working Surfaces CHECK IF APPLICABLE ☐	Surfaces may be irregular in shape, sloped, angled, elevated, slippery, obstructed, etc., all of which are slip and fall hazards. Work areas may require toe boards to prevent objects from falling on workers below.	Visual	Injury, Disability, Death	1. Lift stations, aqua ducts, dams 2. Work areas that require toe boards to prevent objects from falling on workers below.
Temperature Extremes CHECK IF APPLICABLE ☐	Temperature extremes, hot or cold, have definite health and safety hazards, as well as having a limiting effect on the ability of a worker to adequately perform tasks.	Thermometer, Heat Stress - Wet Bulb Globe Thermometer (WBGT)	1. Cold - Frost bite, loss of coordination, hypothermia, disability, death. 2. Heat – heat exhaustion, heat stress, disorientation, death.	1. Working in freezers, extreme cold climate conditions. 2. Working in boilers, super-heated areas (cooling towers), areas that have steam/ heat distribution pipes running through work areas.
Humidity CHECK IF APPLICABLE ☐	High humidity can aggravate several conditions: 1. Visibility 2. Can cause all types of surfaces to become slippery. 3. Accelerate Heat loss. 4. Increase chill effect.	Hygrometer	Can cause slips, falls, physical discomfort, heat exhaustion, affect performance of tasks.	1. Boiler rooms 2. Digesters 3. Freezers
Hazard	Explanatory notes	Method of test	Effects of Hazard	Examples
Noise CHECK IF APPLICABLE ☐	If sound levels exceed 80 DBA then work practices shall conform to requirements of current regulations respecting Hearing Conservation and Noise Control in Workplaces	Sound level meters	Distraction, stress, disorientation, communication problems, hearing loss.	Sources include operating equipment, such as jackhammers, pumps, grinders, other work procedures.
Human Factors				
Phobias CHECK IF APPLICABLE ☐	Some workers are not suitable for work in confined spaces. Because of these factors, they can cause injuries to themselves or others.	Medical interview screening	Injury, disability, death	1. Claustrophobia 2. Fear of heights
Mental & Physical Condition CHECK IF APPLICABLE ☐	All workers must be mentally and physically capable of performing the work.	Visual, medical examination (pre-employment, annuals)	Injury, disability, death	1. Intoxication (alcohol, drug abuse) 2. Impairment (prescription medication)

Appendix C

Checklist for Confined Space Entry	
Pre Entry	
	Have you identified and understand the work required to be performed and who authorized the work?
	Have you Identified hazards, mechanisms of injury through a hazard assessment? See Appendix
	Have you ensured the space is structurally safe for entry?
	Have you arranged for monitoring of the stability of the vessel, building, and soil?
	Have you developed a “plan” for the confined space?
	Have all supervisory or responsible party personnel been identified.
	Have you secured an entry permit?
	Have you established control of the perimeter (traffic and pedestrian control)?
	Have you assigned responsibility for a space entrance attendant (watch)?
	Have you arranged for log reading on the Confined Space Entry Permit Form?
	Have you arranged to secure all energy source hazards through a proper lock-out system (blanking lines, cutting power)?
	Have you developed an emergency Action Plan?
	Have you verified that all required personal protective equipment is readily available, in place, and being properly worn (harnesses (full body); retrieval system with back-up system; floatation devices; head protection; coveralls and chemical suits as may be required)?
	Have you made arrangements for intrinsically safe lighting and communications systems should the plan require it?
	Have you made arrangements to verify that entry conditions remain acceptable throughout the duration of the authorized entry?
Post-Entry	
	Have you arranged for all tools and equipment to be removed?
	Have you completed any required decontamination process if necessary?
	Have you taken steps to ensure that the confined space has been secured against future unauthorized entry?
	Have you accounted for all personnel?

Appendix D

Duties of the Attendant

1. Know and understand the confined space specific plan and rescue plan before taking your post.
2. Continuously maintain an accurate count of workers inside and outside of the confined space.
3. Remain outside the permit space during entry operations until relieved by another attendant.
4. Communicate with entrants, as often as necessary, to monitor entrant status and to alert entrants of the need to evacuate, when necessary.
5. Monitor activities inside and outside the confined space to determine if it is safe for entrants to remain in the confined space and orders of evacuation, when necessary.
6. Summon rescue and emergency services when assistance for emergency exists.
7. Take the following actions when unauthorized persons approach or enter a permit space while entry is underway.
   a) Warn them to stay away, or exit immediately if they have entered.
   b) Inform the authorized entrants and entry supervisor if unauthorized persons enter the permit space.
8. Perform non-entry rescues as specified by the rescue plan.
9. Ensure warning signs and permit is posted at the confined space entry point including any required traffic and pedestrian control signage.
10. **Perform no other duties that might interfere with their primary duty to monitor and protect authorized entrants**

Appendix E

Confined Space Entry Permit

POST PERMIT AT JOB SITE UNTIL JOB IS COMPLETED. IN CASE OF EMERGENCY CALL 911

Section A

Person Issuing Permit:		Signature:	
Permit Issued Date:			Time:
Permit Expires Date			Time:
Description of Location:		School Name:	
Street Address:		Purpose of Entry:	
Supervisor(s) in Charge of Crew:		Work to be Performed in Space:	
Standby Personnel/ Attendant:			

Names of Authorized Personnel Entering Space:

Section B

Pre Entry Checklist	**Yes**	**No**
Has the surrounding area been surveyed and found free of hazardous atmospheric hazards?		
Is the work area likely to remain free of any dangerous air contaminants?		
Have all personnel in the designated work area been briefed on paper work procedure and the location of communications and who to contact in an emergency?		
Do all areas of work and machinery have some type of lockout and tag out installed in the proper place?		
Will testing be done continuously while the space is occupied?		
Is all safety equipment (i.e. gas monitor) to be used in good condition an in proper working order?		

NOTICE: IF ANY OF THE ABOVE QUESTIONS ARE ANSWERED "NO", DO NOT ENTER! CONTACT YOUR IMMEDIATE SUPERVISOR

Scan and send a copy of this permit to the OHS Coordinator

don.doherty@btps.ca or send as a message to (780)842-8912

Prior to starting confined space work.

See reverse side of page to complete this form.

Section C		
Did you (Personnel)	**Yes**	**No**
Receive a pre-entry briefing on the plan to follow while in the confined space?		
Receive a pre-entry briefing on identifying and using PPE in confined space?		
Receive a pre-entry briefing on emergency rescue procedures?		
Has/ Have the:		
Testing equipment been calibrated properly?		
Confined space/area been tested by a qualified person?		
The confined space/area been assessed for; - Atmospheric contaminants, including gases, vapours, fumes, dusts or mists? - Oxygen level been tested to be between 19.5 – 23%? -Tested for the accumulation of flammable, combustible or explosive agents?		
Potential hazards of conductive heat transfer been evaluated?		
Any Hot Work considerations been assessed; - Have Hot Work signs been posted? - Has a permit been approved and posted? - Has the Hot Work procedure been communicated?		

Space Preparation Methods: Check all that apply

Drained ☐ Inerted ☐ Purged ☐ Flushed ☐ Steamed ☐ Ventilated ☐ Barricaded ☐

Other: (Describe Method)

Safety Equipment (Check off appropriate equipment to be used)

	Cell Phone		Harness		Retrieval/Life line
	Gas Monitor		Hoisting Equipment		Safety Harness and Lifelines for entry and exit
	Eye Wash		Intrinsically safe Equipment		
	First aid Kit		Non Spark Tools		SCBA for entry and standby persons
	Foot Protection		Statically Grounded		Ground Fault Circuit Line Interrupter
	Protective Clothing		Traffic Control		Hand Protection
	Radio		Tripod/ winch		Hard Hat
	Respiratory Protection		Personal Gas Monitor		Other:

Periodic Atmospheric Tests

Oxygen	%	Time	INIT	Oxygen	%	Time	INIT	Oxygen	%	Time	INIT	Oxygen	%	Time	INIT
LEL	%	Time	INIT	LEL	%	Time	INIT	LEL	%	Time	INIT	LEL	%	Time	INIT
CO		Time	INIT	CO		Time	INIT	CO		Time	INIT	CO		Time	INIT
H2S		Time	INIT	H2S		Time	INIT	H2S		Time	INIT	H2S		Time	INIT

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety procedures and plans have been received and are understood. Note: Entry cannot be approved if any squares are marked in the "No" column in Section B.

Permit Prepared By:	Print Name:	Signature:
Approved by:	Print Name:	Signature

Scan and send a copy of this permit to the OHS Coordinator

don.doherty@btps.ca or send as a text message to (780)842-8912

Prior to starting confined space work.